Notice of Allowability	Application No.	Applicant(s)	
	09/673,785	NELSON ET AL.	
	Examiner	Art Unit	
	Chih-Min Kam	1653	

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address--

All claims being allowable, PROSECUTION ON THE MERITS IS (OR REMAINS) CLOSED in this application. If not included herewith (or previously mailed), a Notice of Allowance (PTOL-85) or other appropriate communication will be mailed in due course. **THIS NOTICE OF ALLOWABILITY IS NOT A GRANT OF PATENT RIGHTS.** This application is subject to withdrawal from issue at the initiative of the Office or upon petition by the applicant. See 37 CFR 1.313 and MPEP 1308.

1. ☒ This communication is responsive to *4/18/05*.

2. ☒ The allowed claim(s) is/are *1-10,12,14-16,18-20 and 22-27*.

3. ☒ The drawings filed on *22 July 2002* are accepted by the Examiner.

4. ☒ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
   a) ☒ All b) ☐ Some* c) ☐ None of the:
      1. ☐ Certified copies of the priority documents have been received.
      2. ☐ Certified copies of the priority documents have been received in Application No. _____ .
      3. ☒ Copies of the certified copies of the priority documents have been received in this national stage application from the International Bureau (PCT Rule 17.2(a)).

   * Certified copies not received: _____.

Applicant has THREE MONTHS FROM THE "MAILING DATE" of this communication to file a reply complying with the requirements noted below. Failure to timely comply will result in ABANDONMENT of this application.
THIS THREE-MONTH PERIOD IS NOT EXTENDABLE.

5. ☐ A SUBSTITUTE OATH OR DECLARATION must be submitted. Note the attached EXAMINER'S AMENDMENT or NOTICE OF INFORMAL PATENT APPLICATION (PTO-152) which gives reason(s) why the oath or declaration is deficient.

6. ☐ CORRECTED DRAWINGS (as "replacement sheets") must be submitted.
   (a) ☐ including changes required by the Notice of Draftsperson's Patent Drawing Review (PTO-948) attached
      1) ☐ hereto or 2) ☐ to Paper No./Mail Date _____.
   (b) ☐ including changes required by the attached Examiner's Amendment / Comment or in the Office action of Paper No./Mail Date _____.

Identifying indicia such as the application number (see 37 CFR 1.84(c)) should be written on the drawings in the front (not the back) of each sheet. Replacement sheet(s) should be labeled as such in the header according to 37 CFR 1.121(d).

7. ☐ DEPOSIT OF and/or INFORMATION about the deposit of BIOLOGICAL MATERIAL must be submitted. Note the attached Examiner's comment regarding REQUIREMENT FOR THE DEPOSIT OF BIOLOGICAL MATERIAL.

Attachment(s)

1. ☐ Notice of References Cited (PTO-892)
2. ☐ Notice of Draftperson's Patent Drawing Review (PTO-948)
3. ☐ Information Disclosure Statements (PTO-1449 or PTO/SB/08), Paper No./Mail Date _____
4. ☐ Examiner's Comment Regarding Requirement for Deposit of Biological Material
5. ☐ Notice of Informal Patent Application (PTO-152)
6. ☒ Interview Summary (PTO-413), Paper No./Mail Date *20050622* .
7. ☒ Examiner's Amendment/Comment
8. ☒ Examiner's Statement of Reasons for Allowance
9. ☐ Other _____.

An **Examiner's Amendment** to the record appears below. Should the changes and/or additions be unacceptable to applicant, an amendment may be filed as provided by 37 CFR 1.312. To ensure consideration of such an amendment, it MUST be submitted no later than the payment of the issue fee.

Authorization for this examiner's amendment was given in a telephone interview with Daniel Monaco on June 23, 2005.

Examiner's Amendments to the specification:

Please insert the following paragraph after the title at page 1:

This application is a 371 of international application PCT/GB99/01211, filed April 21, 1999, which claims the foreign priority of United Kingdom Application No. 9808407.2, filed April 21, 1998.

Examiner's Amendments to the Claims:

Cancel claims 13 and 17.

Claims 1, 4-7, 10, 12, 14, 15, 19, 20 and 24-26 have been amended as follows:

1. (Currently amended) A synthetic peptide factor comprising the amino acid sequence SEQ ID NO:2 wherein:

a) said sequence is modified such that at least one ~~or both~~ of i) SEQ ID NO:2 tyrosine amino acid residue 5 and ii) SEQ ID NO:2 arginine amino acid residue 9 are substituted, wherein said tyrosine amino acid residue 5 is substituted with a tyrosine analogue, ~~or~~ and said arginine amino acid residue 9 is substituted with an arginine analogue~~, respectively~~; and

b) the synthetic peptide factor ~~is capable of binding~~ binds to laminin receptors.

4. (Currently amended) The synthetic peptide factor of claim 1, wherein the SEQ ID NO:2 arginine residue 9 is substituted by ~~Citrulline~~ citrulline.

5. (Currently amended) A method of antagonizing a laminin receptor in a patient, the method comprising the ~~steps~~ step of[[:]]

~~a)~~ administering to the patient a medicament comprising a synthetic peptide factor comprising the amino acid sequence SEQ ID NO:2 in an amount effective to bind the laminin receptor as an antagonist, wherein said sequence is modified such that ~~at least one or both of i) SEQ ID NO:2 tyrosine amino acid residue 5 and ii)~~ SEQ ID NO:2 arginine amino acid residue 9 ~~are~~ is substituted with ~~a tyrosine analogue or~~ an arginine analogue~~, respectively, and b) binding the synthetic peptide factor to the laminin receptor~~.

6. (Currently amended) A method of agonizing a laminin receptor in a patient, the method comprising the ~~steps~~ step of[[:]]

~~a)~~ administering to the patient a medicament comprising a synthetic peptide factor comprising the amino acid sequence SEQ ID NO:2 in an amount effective to bind the laminin receptor as an agonist, wherein said sequence is modified such that ~~at least one or both of i)~~ SEQ ID NO:2 tyrosine amino acid residue 5 ~~and ii) SEQ ID NO:2 arginine amino acid residue 9~~ ~~are~~ is substituted with a tyrosine analogue ~~or arginine analogue, respectively, and b) binding the synthetic peptide factor to the laminin receptor~~.

7. (Currently amended) The method of claim 6 wherein said medicament is for ~~treating endothelial cell wounding~~ promoting wound healing.

10. (Currently amended) The synthetic peptide factor of claim 2, wherein the SEQ ID NO:2 arginine residue 9 is substituted by ~~Citrulline~~ citrulline.

12. (Currently amended) The method of claim 5, wherein said synthetic peptide ~~has~~ having an N-terminal amino acid residue and a C-terminal amino acid residue is further

modified, wherein the N-terminal amino acid residue is chemically modified by the addition of an amino acid capping moiety, the C-terminal amino acid residue is chemically modified by the addition of an amino acid capping moiety, or a cysteine residue thiol group is chemically modified by the addition of an amino acid capping moiety to the cysteine residue thiol group.

14. (Currently amended) The method of claim 12, wherein the SEQ ID NO:2 arginine residue 9 is substituted by ~~Citrulline~~ citrulline.

15. (Currently amended) The method of claim 6, wherein said synthetic peptide ~~has~~ having an N-terminal amino acid residue and a C-terminal amino acid residue is further modified, wherein the N-terminal amino acid residue is chemically modified by the addition of an amino acid capping moiety, the C-terminal amino acid residue is chemically modified by the addition of an amino acid capping moiety, or a cysteine residue thiol group is chemically modified by the addition of an amino acid capping moiety to the cysteine residue thiol group.

19. (Currently amended) A synthetic peptide factor comprising ~~an N-terminal amino acid residue and a C-terminal amino acid residue, and~~ the amino acid sequence SEQ ID NO:2, said peptide factor having an N-terminal amino acid residue and a C-terminal amino acid residue, wherein

a) said sequence is modified by at least one first modification and optionally by at least one second modification; and

b) the synthetic peptide factor ~~is capable of binding~~ binds to laminin receptors,

wherein said first modification is selected from the group consisting of: substitution of SEQ ID NO:2 tyrosine amino acid residue 5 with a tyrosine analogue and substitution of SEQ ID NO: 2 arginine amino acid residue 9 with an arginine analogue; and

wherein said second modification is selected from the group consisting of: chemical modification of the N-terminal amino acid residue by the addition of an amino acid capping moiety; chemical modification of the C-terminal amino acid residue by the addition of an amino acid capping moiety; chemical modification of a cysteine residue thiol group by the addition of an amino acid capping moiety to the cysteine residue thiol group; replacement of a peptide bond with a protease-resistant peptide bond isostere; replacement of a glycine residue with an α,α-dialkyl substituted amino acid; and stabilisation of a helical turn of the peptide using suitable intra chain linkers.

20. (Currently amended) A synthetic peptide factor comprising the amino acid sequence SEQ ID NO:2, ~~and~~ said peptide factor having an N-terminal amino acid residue and a C-terminal amino acid residue, wherein

a) said sequence is modified by ~~at least one~~ a first modification and by at least one second modification; and

b) the synthetic peptide factor ~~is capable of binding~~ binds to laminin receptors,

wherein said first modification is selected from the group consisting of: substitution of SEQ ID NO:2 tyrosine amino acid residue 5 with a tyrosine analogue and substitution of SEQ ID NO: 2 arginine amino acid residue 9 with an arginine analogue; and

wherein said second modification is selected from the group consisting of: chemical modification of the N-terminal amino acid residue by the addition of an amino acid capping moiety; chemical modification of the C-terminal amino acid residue by the addition of an amino acid capping moiety; chemical modification of a cysteine residue thiol group by the addition of an amino acid capping moiety to the cysteine residue thiol group; replacement of a peptide bond

with a protease-resistant peptide bond isostere; replacement of a glycine residue with an α,α-dialkyl substituted amino acid; and stabilisation of a helical turn of the peptide using suitable intra chain linkers.

24. (Currently amended) A method of antagonizing a laminin receptor in a patient, the method comprising the ~~steps~~ step of[[:]]

~~a)~~ administering to the patient a medicament comprising a synthetic peptide factor in an amount effective to bind the laminin receptor as an antagonist, wherein said peptide factor comprises ~~comprising~~ the amino acid sequence SEO ID NO:2, ~~and~~ said peptide factor having an N-terminal amino acid residue and a C-terminal amino acid residue;

wherein said sequence is modified by ~~at least one~~ a first modification and optionally by at least one second modification;

wherein said first modification is ~~selected from the group consisting of: substitution of SEQ ID NO:2 tyrosine amino acid residue 5 with a tyrosine analogue and~~ substitution of arginine amino acid residue 9 with an arginine analogue; and

wherein said second modification is selected from the group consisting of: chemical modification of the N-terminal amino acid residue by the addition of an amino acid capping moiety; chemical modification of the C-terminal amino acid residue by the addition of an amino acid capping moiety; chemical modification of a cysteine residue thiol group by the addition of an amino acid capping moiety to the cysteine residue thiol group; replacement of a peptide bond with a protease-resistant peptide bond isostere; replacement of a glycine residue with an α,α-dialkyl substituted amino acid; and stabilization of a helical turn of the peptide using suitable intra chain linkers~~; and~~

~~b) binding the synthetic peptide factor to the laminin receptor~~.

25. (Currently amended) A method of agonizing a laminin receptor in a patient, the method comprising the ~~steps~~ step of[[:]]

~~a)~~ administering to the patient a medicament comprising a synthetic peptide factor in an amount effective to bind the laminin receptor as an agonist, wherein said peptide factor comprises ~~comprising~~ the amino acid sequence SEO ID NO:2, ~~and~~ said peptide factor having an N-terminal amino acid residue and a C-terminal amino acid residue;

wherein said sequence is modified by ~~at least one~~ a first modification and optionally by at least one second modification;

wherein said first modification is ~~selected from the group consisting of:~~ substitution of SEQ ID NO:2 tyrosine amino acid residue 5 with a tyrosine analogue ~~and substitution of arginine amino acid residue 9 with an arginine analogue~~; and

wherein said second modification is selected from the group consisting of: chemical modification of the N-terminal amino acid residue by the addition of an amino acid capping moiety; chemical modification of the C-terminal amino acid residue by the addition of an amino acid capping moiety; chemical modification of a cysteine residue thiol group by the addition of an amino acid capping moiety to the cysteine residue thiol group; replacement of a peptide bond with a protease-resistant peptide bond isostere; replacement of a glycine residue with an α,α-dialkyl substituted amino acid; and stabilisation of a helical turn of the peptide using suitable intra chain linkers~~; and~~

~~b) binding the synthetic peptide factor to the laminin receptor~~.

26. (Currently amended) The method of claim 25 wherein said medicament is for ~~treating endothelial cell wounding~~ promoting wound healing.

The following is an **Examiner's Statement of Reasons for Allowance**: The following reference appears to be related to the claimed invention. Nelson *et al.* (J. Biol. Chem. 271, 26179-26186 (1996)) teach a laminin-antagonist peptide with amino acid residues 33-42 of mEGF interacts with a 67 kDa laminin receptor of breast cancer and endothelial cell. However, the reference does not teach or suggest a synthetic peptide factor comprising the amino acid sequence SEQ ID NO:2 (CVIGYSGDRC), wherein the sequence is modified and has at least one of SEQ ID NO:2 tyrosine amino acid residue 5 being substituted with a tyrosine analogue and SEQ ID NO:2 arginine amino acid residue 9 being substituted with an arginine analogue. Therefore, the claims are allowable over the art of record.

Any comments considered necessary by applicant must be submitted no later than the payment of the issue fee and, to avoid processing delays, should preferably accompany the issue fee. Such submissions should be clearly labeled "Comments on Statement of Reasons for Allowance."

Any inquiry concerning this communication or earlier communications from the examiner should be directed to Chih-Min Kam whose telephone number is (571) 272-0948. The examiner can normally be reached on 8.00-4:30, Mon-Fri.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Jon Weber can be reached at 571-272-0925. The fax phone number for the organization where this application or proceeding is assigned is 571-273-8300.

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see http://pair-direct.uspto.gov. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free).

Chih-Min Kam, Ph. D. CMK
Patent Examiner

JON WEBER
SUPERVISORY PATENT EXAMINER

CMK

June 23, 2005